Claims

1. A conjugate for mediating a cell-specific, compartment-specific or membrane-specific transport, wherein the conjugate comprises the following components:

   - a transport mediator for the cell membrane,
   - a cell-specific, compartment-specific or membrane-specific address protein or peptide, and
   - an active substance to be transported.

2. The conjugate according to claim 1, wherein the transport mediator is a peptide or protein which can pass through the plasma membrane.

3. The conjugate according to claim 1 or 2, wherein the transport mediator is derived from the penetratin family or is transportan or parts thereof or is a bacterial or viral transport protein.

4. The conjugate according to claim 3, wherein one of the penetratins has the following sequence:

   NH_2-RQIKIWFQNRRMKWKK-

5. The conjugate according to any one of the preceding claims, wherein the cell-specific, compartment-specific or membrane-specific address protein or peptide is selected from the group consisting of:

   for import into the ER H_3N^+-Met-Met-Ser-Phe-Val-Ser-Leu-Leu-Leu-Val-Gly-Ile-Leu-Phe-Trp-Ala-Thr-Glu-Ala-Glu-Gln-Leu-Thr-Lys-Cys-Glu-Val-Phe-Gln-

for reimport into the ER	H_2N-Lys-Asp-Glu-Leu-COO^-
for import into mitochondria	H_3N^+-Met-Leu-Ser-Leu-Arg-Gln-Ser-Ile-Arg-Phe-Phe-Lys-Pro-Ala-Thr-Arg-Thr-Leu-Cys-Ser-Ser-Arg-Tyr-Leu-Leu
for import into the nucleus	-Pro-Pro-Lys-Lys-Lys-Arg-Lys-Val
	H_3N^+-Pro-Lys-Lys-Lys-Arg-Lys-Val- (= nuclear localisation sequence from SV40-T antigen)
for import into peroxisomes	H_2N-Ser-Lys-Leu-COO^-
for binding to cell membrane	H_3N^+-Gly-Ser-Ser-Lys-Ser-Lys-Pro-Lys-

6. The conjugate according to claim 5, wherein the sequence for the import into the nucleus has the following sequence:

H_3N^+-Pro-Lys-Lys-Lys-Arg-Lys-Val-

7. The conjugate according to any one of the preceding claims, wherein the active substance is selected from the group consisting of nucleic acids, proteins/peptides and/or chemical substances.

Sub C1

8. The conjugate according to any one of the preceding claims, wherein the conjugate has the following structure:

transport mediator - address protein - active substance

9. The conjugate according to any one of the preceding claims, wherein a spacer is also present, if applicable.

10. The conjugate according to claim 9, wherein the spacer is located between the address protein and the active substance.

11. The conjugate according to claim 9 or 10, wherein the spacer is polylysine, polyethylene glycol or polyvinyl pyrrolidone.

12. A method of preparing a conjugate according to any one of claims 1 to 11, comprising the steps of:

1) separate peptide synthesis of "P", "AP", and the spacer, if applicable,
2) covalent bond between "AP" and active substance, if applicable, with a spacer in between,
3) redox coupling of the product from step 2) with "P" by means of redox coupling.

13. The method according to claim 12, wherein the peptide synthesis is carried out according to the known Merrifield method.

14. The method according to claim 12 or 13, wherein the redox coupling is carried out in an aqueous DMSO solution.

15. The method according to any one of claims 12 to 14, wherein a further purification step follows.

16. The method according to claim 15, wherein purification takes place by means of HPLC.

17. Use of a conjugate according to any one of claims 1 to 11 for the cell-specific, compartment-specific or membrane-specific transport of a desired active substance.

Sub C7

18. Use according to claim 17 for use in diagnosis and/or therapy.

add C8